
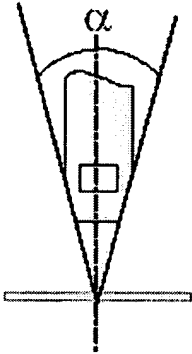


Enclosure 5	
 <p>HOOK ANGLE</p>	<p><i>Schneidwinkel (cutting edge angle)</i>  <b>HOOK ANGLE</b></p> <p>The hook angle is sometimes called the rake and you can see it by looking down at the top of your bit – notice the angle the cutting edge makes with the overall bit diameter. (See drawing) This is the angle at which the cutting edge meets the stock and its purpose is to help leave a smoother, splinter-free finish. The hook angle is determined by the slant of the cutting edge towards the center of the bit.</p>
 <p>Keilwinkel</p>	<p>Bei allen Werkzeugen hat die Werkzeugschneide die Form eines Keils. Man sagt auch Schneidkeil. Durch die Größe des Keils und seine Stellung auf der Werkstückoberfläche entstehen folgende Schneidenwinkel:</p> <p>a (alpha) = Freiwinkel  b (beta) = Keilwinkel  c (gamma) = Spanwinkel  d (delta) = Schnittwinkel</p> <p>Die Schneidenwinkel haben Einfluss auf die Spangröße und die Oberflächengüte (rau/glatt),.</p>




**See also SBI Glossary of Blade Terminology**

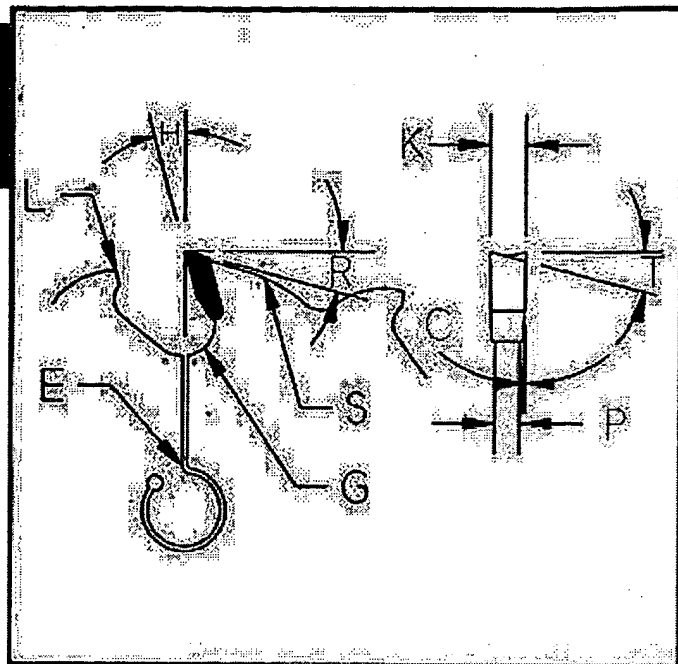
[http://www.specialtyblades.com/technical\\_info/glossary.html](http://www.specialtyblades.com/technical_info/glossary.html)

**Angles --**

The angle of sharpening for any blade is measured from the blade tip. We use the Greek letter  $\alpha$  (alpha) to designate the angle. It is measured at the absolute tip of the blade, between the line running through the center of the tip and the tangent line to the grind wheel at the tip.

**Cutting Edge Geometry**

	<p><i>Double Bevel</i></p> <p>The most common cutting edge, a Double-Bevel edge can be sharpened to an extremely keen edge. Since the cutting forces are symmetrical to the blade edge, this edge minimizes the tendency for the edge to "roll" or deform.</p>
	<p><i>Chisel Edge</i></p> <p>A pure chisel cutting edge is used when the cut must be co-incident with one side of the blade, or when a "shearing" or scissor action is required.</p>
	<p><i>Modified Chisel</i></p> <p>Similar to a chisel cutting edge, but with an added secondary hone facet at the blade tip. This geometry provides the sharpness of the Double-Bevel edge, while giving an off-center cut.</p>



**Anti-Kickback Limiter - (L)** The Projection at the back of the shoulder which limits the maximum tooth bite to the safe limit for that blade design.

**ATB - Alternate Top Bevel.** Tooth configuration where the top bevel alternates from right to left. Top bevel can range from 100 to 200. Used for crosscutting hardwood and soft wood, and general purpose cutting.

**B re - Arbor Hole Diameter.**

**Brazing -** The method used to attach the carbide tips to the blade body. Both the tip and the body are heated above the melt point of the brazing compound, which then flows by capillary action into the joint forming a bond between the parts.

**Comb - Combination Grind.** Is a mixture of ATB and Flat top where each group of 5 teeth are lead by a flat top raker tooth and followed by top bevel teeth alternating from left to right. General purpose use.

**Conical -** Conical tooth grind. Tooth has a negative radial relief angle. Used for scoring blades where the width of the slot is controlled by the height of the scoring blade.

**Expansion Slots - (E)** Slots cut radially into the blade body which control the expansion of the blade due to heat and centrifugal forces.

**Flat - Flat Top Grind.** Teeth are ground flat on top with 0° of top bevel angle. Durable and long lasting. Used for ripping or general purpose when combined with thin kerf.

**Gullet - (G)** The cut out area in the body in front of each tooth for chip removal. The higher the ratio of teeth to size, the smaller the chip size and the smaller the gullet.

**Hook Angle - (H)** The angle the face of the tooth makes with a line projecting radially from the center of the bore and comes into contact with the tooth. Ranges from 20° to -7°.

**Kerf - (K)** The width of cut the blade makes under ideal conditions and does not account for equipment arbor run out.

**Plate - (P)** The thickness of the saw body.

**Radial Side Clearance - (C)** The clearance angle on the side of the tooth.

**Relief Angle - (R)** The angle the top of the tooth makes away from the cutting edge to a line tangent to the blades circumference.

**Shoulder -** The part of the blade body directly behind each tooth which provides support for the tooth.

**TCG - Triple Chip Grind.** Tooth grind where one flat top tooth is followed by a trapezoidal tooth which is slightly higher. The higher tooth precuts material narrower than final kerf, helping to eliminate chipping in brittle materials such as chip board, and laminates.

**Tensioning Ring -** The area in the blade where it is pretensioned for maximum flatness over a broad temperature range and operational speed. Can be seen on most blades as a faint ring approximately 3/4 the diameter the blade.

**Top Bevel Angle - (T)** The angle the top of the tooth makes from side to side.

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# Glossary

**ATB (Alternate Top Bevel)**

Tooth configuration generally used for crosscutting.

**Crosscut Blade**

Blade that cuts across the direction of the wood grain (perpendicular to grain).

**FT (Flat Top)**

Tooth configuration generally used for ripping.

**Kerf**

Width of the cut made by a saw blade.

**Rip Blade**

Blade that cuts with the direction of the wood grain (parallel to grain).

**TC (Triple Chip)**

Tooth configuration generally used for gang ripping.

**Tension**

Pre-stretching, in the body of the blade, that is intended to counteract the strain from spinning and cutting.